# SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS

*OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, AND 30*

| 1. REQUISITION NUMBER | PAGE 1 OF 37 |
|---|---|
| 96311M-3101-3927 | |

| 2. CONTRACT NO. | 3. AWARD/EFFECTIVE DATE | 4. ORDER NUMBER | 5. SOLICITATION NUMBER | 6. SOLICITATION ISSUE DATE |
|---|---|---|---|---|
| DACW31-03-P-0260 | 17-Jun-2003 | | DACW31-03-T-0068 | 30-May-2003 |

| 7. FOR SOLICITATION INFORMATION CALL: | a. NAME | b. TELEPHONE NUMBER *(No Collect Calls)* | 8. OFFER DUE DATE/LOCAL TIME |
|---|---|---|---|
| | GLORIA J FROST | 410-962-3534 | 11:00 AM 16 Jun 2003 |

9. ISSUED BY CODE CW31

CONTRACTING DIVISION
PO BOX 1715
BALTIMORE MD 21203-1715

TEL: 410-962-5638
FAX: 410-962-0933

10. THIS ACQUISITION IS
- [X] UNRESTRICTED
- [ ] SET ASIDE: % FOR
  - [ ] SMALL BUSINESS
  - [ ] SMALL DISADV. BUSINESS
  - [ ] 8(A)

SIC: 3699

SIZE STANDARD: 500 PERSONS

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
- [ ] SEE SCHEDULE

12. DISCOUNT TERMS
NET 30

- [ ] 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION
- [X] RFQ
- [ ] IFB
- [ ] RFP

15. DELIVER TO CODE
WATERWORKS/ELECTRICAL/ENVIRONN
RANDY HILL
5900 MACARTHUR BLVD NW
WASHINTON DC 20315-0220

16. ADMINISTERED BY CODE E1P0500
CONTR DIV OPERATIONS BR
PO BOX 1715
BALTIMORE MD 21203-1715

17a. CONTRACTOR/ OFFEROR CODE 0H4W1

CORRPRO COMPANIES INCORPORATED
JEFF FOG
1055 WEST SMITH ROAD
MEDINA OH 44256

TEL. 330-725-6681 FACILITY CODE 0H4W1

18a. PAYMENT WILL BE MADE BY CODE T0B0200

USACE FINANCE CENTER
ATTN: DISBURSING
5722 INTEGRITY DRIVE
MILLINGTON TN 38054-5005

- [ ] 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED [ ] SEE ADDENDUM

| 19. ITEM NO. | 20. SCHEDULE OF SUPPLIES/ SERVICES | 21. QUANTITY | 22. UNIT | 23. UNIT PRICE | 24. AMOUNT |
|---|---|---|---|---|---|
| | **SEE SCHEDULE** | | | | |

| 25. ACCOUNTING AND APPROPRIATION DATA | 26. TOTAL AWARD AMOUNT |
|---|---|
| **See Schedule** | **$11,300.00** |

- [ ] 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1. 52.212-4. FAR 52.212-3. 52.212-5 ARE ATTACHED. ADDENDA [ ] ARE [ ] ARE NOT ATTACHED
- [ ] 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA [ ] ARE [ ] ARE NOT ATTACHED

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 0 COPIES
- [ ] TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.

29. AWARD OF CONTRACT: REFERENCE WRITTEN
- [X] OFFER DATED 03-Jun-2003 . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: SEE SCHEDULE

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)

Patricia J Hensley

31c. DATE SIGNED
17-Jun-2003

30b. NAME AND TITLE OF SIGNER *(TYPE OR PRINT)*

30c. DATE SIGNED

31b. NAME OF CONTRACTING OFFICER *(TYPE OR PRINT)*
PATRICIA J HENSLEY / ADDED BY SUMI
TEL: 410-962-7718 EMAIL:

32a. QUANTITY IN COLUMN 21 HAS BEEN
- [ ] RECEIVED
- [ ] INSPECTED
- [ ] ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED

33. SHIP NUMBER
- [ ] PARTIAL
- [ ] FINAL

34. VOUCHER NUMBER

35. AMOUNT VERIFIED CORRECT FOR

32b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE

32c. DATE

36. PAYMENT
- [ ] COMPLETE
- [ ] PARTIAL
- [ ] FINAL

37. CHECK NUMBER

38. S/R ACCOUNT NUMBER

39. S/R VOUCHER NUMBER

40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT

41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER

41c. DATE

42a. RECEIVED BY *(Print)*

42b. RECEIVED AT *(Location)*

42c. DATE REC'D *(YY/MM/DD)*

42d. TOTAL CONTAINERS

Section SF 1449 - CONTINUATION SHEET

| ITEM NO | SUPPLIES/SERVICES | QUANTITY | UNIT | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|
| 0001 | | 1 | Lump Sum | $11,300.00 | $11,300.00 |

PROVIDE IMPRESSED CURRENT PROTECTION SYS
FFP
P.O.C.: PATRICIA GAMBY @ 202-764-2639
WAYNE SMALLS @ 202-764-2641
BUYER: GLORIA FROST @ 410-962-3534
VENDOR REP.:JEFF FOG @ 330-725-6681
PROVIDE AN IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM FOR AN ELEVATED STEEL WATER TANK AND REMOVE THE EXISTING TANK CATHODIC PROTECTION SYSTEM IN STRICT ACCORDANCE WITH THE ENCLOSED STATEMENT OF WORK:
ATTACHMENTS:
1. STATEMENT OF WORK
2. WAGE DETERMINATION DECISION NO. 94-2103 (REV. 28) DATED 04 OCTOBER 2002 OF THE SECRETARY OF LABOR IS APPLICABLE FOR THIS REQUIREMENT.
PURCHASE REQUEST NUMBER: 96311M-3101-3927

| | |
|---|---|
| NET AMT | $11,300.00 |
| ACRN AA Funded Amount | $11,300.00 |

FOB: Destination

## INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

| CLIN | INSPECT AT | INSPECT BY | ACCEPT AT | ACCEPT BY |
|---|---|---|---|---|
| 0001 | N/A | N/A | N/A | Government |

## DELIVERY INFORMATION

| CLIN | DELIVERY DATE | QUANTITY | SHIP TO ADDRESS | UIC |
|---|---|---|---|---|

| | | | |
|---|---|---|---|
| 0001 | POP 23-JUN-2003 TO 24-SEP-2003 | N/A | WATERWORKS/ELECTRICAL/ENVIRONN<br>RANDY HILL<br>5900 MACARTHUR BLVD NW<br>WASHINTON DC 20315-0220<br>(202) 764-2727<br>FOB: Destination |

## ACCOUNTING AND APPROPRIATION DATA

AA: 99 NA X 9883.0000|E2 X 08 2471 008273 96499 2520 001T15
AMOUNT: $11,300.00

## CLAUSES INCORPORATED BY REFERENCE

| | | |
|---|---|---|
| 52.202-1 Alt I | Definitions (Dec 2001) --Alternate I | MAY 2001 |
| 52.209-6 | Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment | JUL 1995 |
| 52.211-13 | Time Extensions | SEP 2000 |
| 52.211-17 | Delivery of Excess Quantities | SEP 1989 |
| 52.211-18 | Variation in Estimated Quantity | APR 1984 |
| 52.219-3 | Notice of Total HUBZone Set-Aide | JAN 1999 |
| 52.219-14 | Limitations On Subcontracting | DEC 1996 |
| 52.222-3 | Convict Labor | AUG 1996 |
| 52.222-7 | Withholding of Funds | FEB 1988 |
| 52.222-12 | Contract Termination-Debarment | FEB 1988 |
| 52.222-14 | Disputes Concerning Labor Standards | FEB 1988 |
| 52.222-15 | Certification of Eligibility | FEB 1988 |
| 52.222-21 | Prohibition Of Segregated Facilities | FEB 1999 |
| 52.222-26 | Equal Opportunity | APR 2002 |
| 52.222-35 | Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans | DEC 2001 |
| 52.222-36 | Affirmative Action For Workers With Disabilities | JUN 1998 |
| 52.222-37 | Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era and Other Eligible Veterans | DEC 2001 |
| 52.223-11 | Ozone-Depleting Substances | MAY 2001 |
| 52.225-13 | Restrictions on Certain Foreign Purchases | JUL 2000 |
| 52.232-27 | Prompt Payment for Construction Contracts | FEB 2002 |
| 52.233-3 | Protest After Award | AUG 1996 |
| 52.236-5 | Material and Workmanship | APR 1984 |
| 52.237-3 | Continuity Of Services | JAN 1991 |
| 52.242-14 | Suspension of Work | APR 1984 |
| 52.242-15 | Stop-Work Order | AUG 1989 |
| 52.243-5 | Changes and Changed Conditions | APR 1984 |
| 52.246-1 | Contractor Inspection Requirements | APR 1984 |
| 52.247-34 | F.O.B. Destination | NOV 1991 |
| 52.252-6 | Authorized Deviations In Clauses | APR 1984 |

| | | |
|---|---|---|
| 52.253-1 | Computer Generated Forms | JAN 1991 |
| 252.204-7003 | Control Of Government Personnel Work Product | APR 1992 |
| 252.209-7004 | Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country | MAR 1998 |
| 252.219-7011 | Notification to Delay Performance | JUN 1998 |
| 252.225-7001 | Buy American Act And Balance Of Payments Program | MAR 1998 |
| 252.225-7002 | Qualifying Country Sources As Subcontractors | DEC 1991 |
| 252.225-7012 | Preference For Certain Domestic Commodities | APR 2002 |
| 252.225-7016 | Restriction On Acquisition Of Ball and Roller Bearings | DEC 2000 |
| 252.236-7000 | Modification Proposals-Price Breakdown | DEC 1991 |
| 252.236-7001 | Contract Drawings, Maps, and Specifications | AUG 2000 |
| 252.236-7006 | Cost Limitation | JAN 1997 |
| 252.243-7001 | Pricing Of Contract Modifications | DEC 1991 |
| 252.246-7000 | Material Inspection And Receiving Report | DEC 1991 |
| 252.247-7024 | Notification Of Transportation Of Supplies By Sea | MAR 2000 |

CLAUSES INCORPORATED BY FULL TEXT

52.211-10 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984)

The Contractor shall be required to (a) commence work under this contract within TEN (10) calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than NINETY TWO (92) CALENDAR DAYS. The time stated for completion shall include final cleanup of the premises.

(End of clause)

52.212-4 CONTRACT TERMS AND CONDITIONS-- COMMERCIAL ITEMS (FEB 2002)

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR

52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement or any excusable delay, setting for the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized,) to the address designated in the contract to receive invoices. An invoice must include--

(1) Name and address of the Contractor;

(2) Invoice date;

(3) Contract number, contract line item number and, if applicable, the order number;

(4) Description, quantity, unit of measure, unit price and extended price of the items delivered;

(5) Shipping number and date of shipment including the bill of lading number and weight of shipment if shipped on Government bill of lading;

(6) Terms of any prompt payment discount offered;

(7) Name and address of official to whom payment is to be sent; and

(8) Name, title, and phone number of person to be notified in event of defective invoice.

Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. Contractors are encouraged to assign an identification number to each invoice.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) Circular A-125, Prompt Payment. If the Government makes payment by Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

(End of clause)

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (APR 2001) (DEVIATION)

(a) Comptroller General Examination of Record. The Contractor agrees to comply with the provisions of this paragraph (a) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-5, Audit and Records-Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to the right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times, the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of form. This does not require the Contractor to create or maintain any record that the contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(b) The Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components –

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C. 4212);

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793); and

(4) 52.247-64, Preference for Privately-Owned U.S.- Flag Commercial Vessels (46 U.S.C. 1241)(flow down not required for subcontracts awarded beginning May 1, 1996).

(5) 52.222-41, the Service Contract Act as Amended (41 U.S.C. 351, et seq.) Subcontracts for certain commercial services may be exempt from coverage if they meet the criteria in FAR 22.1103-4(c) or (d) (see DoD class deviation number 2000-O0006).

(End of clause)

52.222-42 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION
Employee Class Monetary Wage-Fringe Benefits

| | |
|---|---|
| **CIVIL ENGINEERING TECHNICIAN** | **$15.69 PER HOUR** |
| **PLUMBER, MAINTENANCE** | **$19.17 PER HOUR** |
| **ELECTRICIAN, MAINTENANCE** | **$10.10 PER HOUR** |
| **LABORER** | **$10.39 PER HOUR** |

(End of clause)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this clause. As used in this clause, the term “EFT” refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(h) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register in the CCR database and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(i) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

52.236-7 PERMITS AND RESPONSIBILITIES (NOV 1991)

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

(End of clause)

52.249-4 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (SERVICES) (SHORT FORM) (APR 1984)

The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Government shall be liable only for payment under the payment provisions of this contract for services rendered before the effective date of termination.

(End of clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

http://farsite.hill.af.mil

(End of clause)

252.204-7004 REQUIRED CENTRAL CONTRACTOR REGISTRATION (NOV 2001)

(a) Definitions.

As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at http://www.ccr.gov.

(End of clause)

252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (APR 2001) (DEVIATION)

(a) In addition to the clauses listed in paragraph (b) of the Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items (DEVIATION) clause of this contract, the Contractor shall include the terms of the following clause, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

| | |
|---|---|
| 252.225-7014 | Preference for Domestic Specialty Metals, Alternate I (MAR 1998) (10 U.S.C. 2533a). |
| 252.247-7023 | Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631) |
| 252.247-7024 | Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631) |

(End of clause)

STATEMENT OF WORK

# Statement Of Work

**1.0 Description of Work:**

**1.1 Project title:** Washwater Tank Improvements.

**1.2 Work to be Completed:** The Contractor shall furnish all labor, equipment, and materials to design and construct an impressed current cathodic protection system for an elevated steel water tank. The contractor shall use the design in replacing the existing tank cathodic protection system.

**1.3 Work Site:** The location of work to be completed is the Dalecarlia Water Treatment Plant at 5900 MacArthur Boulevard, NW, Washington, DC 20016.

**1.4 Contract Period:** The Contract Period shall be **92 calendar days.**

**1.5 Contact:** Any questions on the technical specifications, site visits or physical layout prior to delivery should be addressed to:

Mr. Wayne Smalls
(alt. Ms. Patty Gamby)
5900 MacArthur Boulevard, NW
Washington, DC 20016
Ph. (202)764-2641 or -2639

**2.0 Submittals:** The Contractor shall submit to the Government for approval four sets of descriptive material to describe the following:

Per attached specification section 13111.

**3.0 Technical Specifications:**

**3.1 Preparation**

The Contractor shall design a new cathodic protection system for the steel wash water tank. The Contractor will demolish the existing cathodic protection system and install and test a new cathodic protection system. All work shall be performed in accordance with specification section 13111.

**3.2 Payment**

Payment shall be lump sum in accordance with the PRICE SCHEDULE, to include all costs necessary for completion of the contract.

**3.3 Shutdown period**

Shutdown of the existing wash water tank to execute cathodic protection system will occur anytime within the Contract Period. The Contracting Officer will give the Contractor a minimum of two weeks notice for the shutdown.

However, the Contracting Officer reserves the right to cancel a scheduled shutdown if conditions warrant. No compensation for the cancellation shall be considered except for a possible time extension.

The shutdown period shall be measured from the time when the Contracting Officer signals that the Contractor can start demolishing the existing cathodic protection system to the time when the new cathodic protection is test, accepted and put into service. This shutdown period is limited to a maximum of 30 calendar days. The Contractor shall work continuously during the shutdown period to complete the work.

**3.4 Execution**

The Contractor shall execute the work in accordance with the Contract Drawings and Specification section attached.

The Contractor shall provide material, labor and equipment to perform the following:

Design a new cathodic protection for an elevated steel water tank. The tank is subject to extreme weather conditions including icing. The cathodic protection must occur via impressed current from an automatic rectifier. The current must be applied to anodes installed in the bowl and riser. **Weld shut the existing handholes.**

Demolish existing cathodic protection. All equipment demolished shall be turned over to the contracting officer.

Install, test and commission the new cathodic protection system. The Contractor shall make all necessary connections.

Provide training and other services required in specification section 13111.

**3.5 Warranty:**

The Contractor shall warrant all work performed under this contract against defects in contractor supplied material and workmanship for a period of one (1) year from final acceptance of the work, except for defects of the Government provided materials.

The Contractor shall promptly remedy, at his own expense, the defects under warranty.

SECTION 13111

CATHODIC PROTECTION SYSTEM (STEEL WATER TANKS)

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

| | |
|---|---|
| ASTM D 1248 | (1998) Polyethylene Plastic Molding and Extrusion Materials |
| ASTM C135.30 | (1988) Zinc-Coated Ferrous Ground Rods for Overhead or Underground Line Construction |
| A518 | Corrosion-Resistant High Silicon Cast Iron |

INSULATED POWER CABLE ENGINEERS ASSOCIATED (IPCEA) PUBLICATIONS

| | |
|---|---|
| S-61-402 | Thermoplastic Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy |

AMERICAN WATERWORKS ASSOCIATION (AWWA)

| | |
|---|---|
| AWWA Standard D104-01 | Automatically Controlled, Impressed-Current Cathodic Protection for the Interior of Steel Water Tanks |

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

| | |
|---|---|
| IEEE Std 81 | (1983) Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of Ground System (Part 1) |
| TC 3 | PVC Fittings for Use with Rigid PVC Conduit and Tubing |
| 250 | Enclosures for Electrical Equipment |

NACE INTERNATIONAL (NACE)

| | |
|---|---|
| NACE RP-03-88 | (1995) Impressed Current Cathodic Protection of Internal Submerged Surfaces or Steel Water Storage Tanks |

| | |
|---|---|
| NACE RP-02-85 | Cathodic Protection of Metallic Structures |

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

| | |
|---|---|
| NEMA FU 1 | (1986) Low Voltage Cartridge Fuses |
| NEMA TC 2 | (1998) Electrical Polyvinyl Chloride (PVC) Tubing (EPT) and Conduit (EPC-40 and EPC-80) |
| NEMA WC 5 | (1992; Rev 2 1996) Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy |

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

| | |
|---|---|
| NFPA 70 | (1999) National Electrical Code |

UNDERWRITERS LABORATORIES (UL)

| | |
|---|---|
| UL 6 | (1997) Rigid Metal Conduit |
| 83 | Thermoplastic-Insulated Wires |
| UL 467 | (1993; Rev thru Apr 1999) Grounding and Bonding Equipment |
| UL 506 | (1994; Rev Oct 1997) Specialty Transformers |
| UL 510 | (1994; Rev thru Apr 1998) Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape |
| UL 514A | (1996; Rev Dec 1999) Metallic Outlet Boxes |
| UL 486A | Wire Connectors and Soldering Lugs for use with copper conductors |

1.2 SUBMITTALS

Government approval is required for submittals having a “G” designation’ submittals not having a “G” designation are for information only. When used, a designation following the “G” designation identifies the office that will review the submittal for the Government. WA indicates that the review will be performed at the Washington Aqueduct Office. The following shall submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Detail Drawings; G, WA

Within 45 days after the date of award of the contract, and before commencement of any
Work four (4) copies of detail drawings consisting of a complete list of equipment and materials including manufacturer’s descriptive and technical literature, catalog cuts, and installation instructions. The

drawings shall provide tank dimensions and show anode arrangement for both elevated and sectional views of the tank, anode size and number, anode material, anode-suspension details, conduit size, wire size, rectifier size and location, handhole details, wiring diagram, and any other pertinent information considered necessary for the proper installation and performance of the system. Shop drawings shall also contain complete wiring and schematic diagrams and any other details required to demonstrate that the system has been coordinated and will function as a unit. The list of materials and equipment shall include catalog cuts diagrams, and other descriptive data for the following list of material. Partial lists submitted from time to time will not be allowed.

a. Water resistivity and water analysis

b. Conductors

c. Anodes and anode configuration

d. Coating material in areas where welding and other work is accomplished.

e. Insulated resistance wire.

f. Layout of anodes in tanks, system layout

g. Special details

h. Certified experience data of installing firm

i. Exothermic weld equipment, material and detail. Hardware layout.

j. Test station and isolation points, and grounding

k. Welding method for electrical connections and steel ring connections.

l. Calculations for

(1) Total current required for system
(2) Life of the anodes
(3) Anode geometry (showing areas of coverage)

m. Catalog cuts for

(1) Rectifiers and Wiring Diagram
(2) Anode Material
(3) Wire and Cable
(4) Permanent Reference Cells
(5) Suspension Rope
(6) Flotation Buoys
(7) Splice Kits
(8) Pressure Entrance Fitting

All detail drawings shall be submitted at one time, as a single submittal, in order to demonstrate that the items have been properly coordinated and will function properly as a unit. A notation shall be made on each shop drawing submitted as to the item's specific use, either by a particular type number referenced on the drawings or in the specifications, or by a description of its specific location.

Contractors Modifications; G, WA

Four (4) copies of detail drawings, showing proposed changes in location and scope or performance, indicating any variations from, additions to, or clarifications of contract drawings. The drawing shall show proposed changes in anode arrangement, anode size and number, anode materials and layout details, conduit size, wire size, mounting details, wiring diagram, and any other pertinent information to the proper installation and performance of the system.

SD-03 Product Data

Miscellaneous Materials; G, WA
Equipment; G WA

Within 45 days after receipt of notice to proceed, an itemized list of equipment and materials including item number, quantity, and manufacturer of each item. This list shall be accompanied by a description of procedures for each type of testing and adjustment, including spot testing of coating for the thickness and holidays. Installation of materials and equipment shall not commence until this submittal is approved.

Spare Parts; G, WA

Spare parts data for each different item of material and equipment specified, after approval of the detail drawings and not later than 3 months prior to the date of beneficial occupancy. The data shall include a complete list of parts, special tools, and supplies with current unit prices and source of supply.

As-Built Drawing; G WA

The as-built drawings shall be a record of the construction as installed. The as-built drawings shall be jointly inspected for accuracy and completeness by the Contractor's quality control representative and by the Contracting Officer prior to the submission of each monthly pay estimate. Upon completion of the work, the Contractor shall submit three full sized sets of the marked prints to the Contracting Officer for approval. If upon review, the as-built drawings are found to contain errors and/or omissions, they will be returned to the Contractor for correction. The Contractor shall correct and return the as-built drawings to the Contracting Officer for approval within ten calendar days from the time the drawings are returned to the Contractor.

SD-06 Test Reports

Testing, Adjusting, and Placing in Service; G, WA

Test reports in booklet from tabulating all field tests and measurements performed, upon completion and testing of the installed system and including potential survey, final system test verifying protection, and holiday coating test. Each test report shall indicate the final position of controls. A certified test report showing that the connecting method has passed a 12-day laboratory test without failure at the place of connection, wherein the anode is subjected to maximum recommended current output while immersed in a 3

percent sodium chloride solution.

Contractor's Modifications; G, WA

Final report including measurements throughout the tank area, indicating that the addition of anodes corrected the conditions which made the additional anodes necessary. The following are required: Installation and testing procedures, anode number, life, and parameters to achieve protective potential.

SD-07 Certificates

Cathodic Protection System; G, WA

Proof that the materials and equipment furnished under this section conform to the specified requirements contained in the referenced standards or publications. In addition, the Contractor must submit a copy of ANSI/NSF 61 classification for all system components located within the tank.

Services of "Corrosion Expert"; G, WA

Evidence of qualifications of the "corrosion expert."

a. The "corrosion expert's" name and qualifications shall be certified in writing to the Contracting Officer prior to the start of construction.

b. Certification shall be submitted giving the name of the firm, the number of years of experience, and a list of not less than five (5) of the firm's installations three (3) or more years old that have been tested and found satisfactory.

SD-10 Operation and Maintenance Data

Cathodic Protection System; G, WA

Four (4) copies of operating manual outlining the step-by-step procedures required for system startup, operation, adjustment of current flow, and shutdown. The manuals shall include the manufacturer's name, model number, service manual, parts list, and brief description of all equipment and their basic operating features. Six (6) copies of maintenance manual listing routine maintenance procedures, recommendation for maintenance testing, possible breakdowns and repairs, and troubleshooting guides. The manuals shall include single line diagrams for the system as installed, instructions in making tank to reference cell potential measurements, and describe the frequency of monitoring. The instructions shall include precautions to ensure safe conditions during repair of system.

Training; G, WA

The proposed Training Course Curriculum (including topics and dates of discussion) indicating that all of the items contained in the operating and maintenance instructions,

as well as demonstrations of routine maintenance operations, including testing procedures included in the maintenance instructions, are to be covered.

## 1.3 GENERAL REQUIREMENTS

The cathodic protection design/install construction shall provide all engineering services, materials, equipment, labor, and supervision, necessary to produce a continuous flow of direct current from electrodes in the electrolyte to the metal tank surfaces; and placing the cathodic protection system in operable status. The Contractor shall install complete automatic cathodic protection to prevent corrosion on the interior submerged surface of the water tank. The Contractor's installation shall meet the criteria and protection outlined in paragraph CRITERIA OF PROTECTION for a 20 year life. The purpose of the system is to adequately and efficiently protect the surfaces of the metal against corrosion where the surfaces are in contact with water; this is in addition to the protective coating on the tank. The contact drawings indicate the location and size of the tank. The design of this system is based on an impressed current system. The Contractor may modify the cathodic protection system after site verification and analysis if the proposed modification will provide equal or better overall system performance. This modification must be fully described and submitted by the Contractor and approved by the Contracting Officer. Modifications or additional anodes shall be at no additional cost to the Government. Any modifications shall incorporate all requirements of this specification. The intent of this specification is to use this impressed current system as described with anodes as are found necessary in calculation and submitted data to meet this specification. Anodes shall be installed in sufficient number and of the required type, size and spacing to obtain a uniform current distribution of 0.5 milliampere per 0.09 square meters (1 square foot) 1 square foot to all submerged surfaces in the tank when filled with water to the over-flow level. The anode suspension system shall be designed to be resistant to ice damage and in accordance with AWWA Standard D104-97, Section 4.2.4.1.1 Type A, Horizontal System. The anode suspension system shall consist of a minimum 5/16" polyester cord. The cord shall be secured to steel anchors welded to the side wall of the tank bowl or to the exterior of the dry access column of spheroidal type tanks and the side wall of wet risers which are 30" diameter or larger. All cord to cord connections shall be tied and taped.

All materials in contact with the water, or exposed to the interior of the tank, shall be classified in accordance with ANSI/NSF 61 "Drinking Water System Components."

### 1.3.1 Contractor's Modifications

The Contractor may modify the cathodic protection system after review of the project, site verification and analysis if the proposed modifications include impressed current anodes and rectifiers and will provide better overall system performance. The modifications shall be fully described, shall be approved by the Contracting Officer and shall meet the following criteria. The proposed system shall achieve a minimum "Instant Off" potential of minus 850 millivolts with references to a saturated copper-copper sulfate reference cell on the tank components. The Contractor shall take measurements and the current and voltage of the rectifier shall be adjusted as required to produce a minimum of minus 850 millivolts "Instant Off" potential between the structure being tested and the reference cell. This potential shall be obtained over 95 percent of the metallic area without the "Instant Off" potential exceeding 1100 millivolts.

### 1.3.2 Services of "Corrosion Expert"

The Contractor shall obtain the services of a "corrosion expert" to supervise and inspect the installation and performance of the cathodic protection system. "Corrosion expert" refers to a person, who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by professional education and related practical experience, is qualified to engage in the practice of corrosion control on steel water tanks. Such a person must be accredited or certified by the National Association of Corrosion Engineers (NACE) as a NACE Accredited Corrosion Specialist or a NACE certified Cathodic Protection (CP) Specialist or be a registered

professional engineer who has certification or licensing that includes education and experience in corrosion control on steel water tanks, if such certification or licensing includes 5 years experience in corrosion control on steel water tanks of the type under this contract. The "corrosion expert" shall ensure that the cathodic protection system is installed, tested, and placed into service in accordance with the requirements specified; and shall also design, make calculations, and assure quality control as required.

The system shall be installed by personnel specifically trained by the constructor to provide all workmanship required for corrosion control performance. All personnel shall be subject to Federal Substance Abuse and Testing Regulations.

1.3.3 Verification of Site Conditions

The Contractor shall coordinate and properly relate this work to the work of all trades. The general locations of the structures to receive protection are shown. The Contractor shall visit the premises and become familiar with all details of the work and working conditions, shall verify existing conditions to the field, determine the exact locations of structures to be protected, and advise the Contracting Officer of any discrepancy before performing any work. The Contractor shall take resistivity measurement of the water and analysis of the water and provide this data with detail drawings of the system for approval.

## PART 2 PRODUCTS

All hardware used in conjunction with the system shall be protected against corrosion.

### 2.1 IMPRESSED CURRENT ANODES

#### 2.1.1 Precious Metal Anodes

##### 2.1.1.1 Selection Requirements

Precious metal anodes shall be wire in form. Selection of the configuration should be left to the designer of the system. Long, continuous wire from lengths of precious metal anodes may have an attenuating effect. This can be overcome by using parallel feeder cable connected to segmented lengths of precious metal anodes at intervals. Such assemblies shall be factory assembled with factory sealed and tested electrical connections to the anode.

The anode materials shall be selected in accordance with the design and shall consist of one of the following:

1. Minimum .062" diameter titanium with a precious metal oxide coating.
   connections. Anode material shall have a minimum rating of twenty (20) year life, 100 ($mA/Ft^2$).

2. Anode Connecting Cables: Anode wire shall be connected to a common header/circuit cable using copper crimp connectors or butt splices. All connections shall be soldered and encapsulated within an epoxy splice kit.

3. Header/Circuit Wires: Insulated for 600 volts with RHW/USE in accordance with ASTM, D1248, Type I, Class C, Grade 5, and IPCEA S-61-402. The conductor shall be stranded copper, not less than No. 10 AWG.

4. Header/Circuit Wire Connection: Copper crimp connector or butt splice, flood soldered, encapsulated in epoxy.

5. Anode Suspension System: The anode suspension system shall consist of 5/16" polyester rope supports secured to anchors welded to the tank. The system shall incorporate buoyant flotation devices to allow the anode hoop to float below the surface of the water.

All anode to header cable connections shall be sealed to prevent water migration.

## 2.2 RECTIFIERS AND ASSOCIATED EQUIPMENT

### 2.2.1 Rectifier Unit

The rectifier unit shall perform in accordance with ANSI/AWWA Standard D104-97 Section 4: 4.1.1.1.1, Type A, IR drop free system, and include:

1. Automatic potential control.
2. DC Output Manual Control: Transformer taps, 4 coarse, 5 fine.
3. Selenium or silicon rectifying elements
4. Variable resistors
5. Terminal block
6. Overload and Short Circuit Protection: Molded case circuit breaker thermal-magnetic type.
7. Lighting, surge, and overload protection
8. Voltmeter(s) and ammeter(s)
9. Enclosure: NEMA ICS, Type 4X, air cooled, fiberglass, aluminum or stainless steel, suitable for tank wall mounting. Enclosure shall include hinged door padlock hasp and mounting bracket.
10. Provision to vary current output from 0% to 100% of rated capacity
11. Provisions for mounting, grounding, and locking equipment, devices and enclosures
12. Electrical Ratings: As follows: Input voltage at 60 Hz: 115 volts single phase.
13. Voltmeters – DC output capacity in volts in accordance with design
14. Ammeters – DC output capacity in amperes in accordance with design. One ammeter shall indicate rider cathodic protection current and another shall indicate bowl cathodic protection current.
15. Number of circuits or separate rectifiers in accordance with design.
16. Fuse holders with fuses for each DC circuit.
17. DC Output Automatic Controller: To be housed within the rectifier unit or in a separate weatherproof enclosure, solid-state circuitry, capable of maintaining a constant tank-to-water potential of -900 mV " 25 mV, must include circuitry which compensates for "IR" drop, Harco/CPS Waterworks TASC VII or approved equal.
18. Metering: Panel meters for current, voltage, and potential, not less than 2-1/2 inch square, two percent full scale accuracy or a combined digital meter.
19. Surge Protection: Over voltage protection shall be provided the input and output circuits.

The overall efficiency of the rectifier shall be not less than 65 percent when operated at nameplate rating and shall be capable of supplying continuous full rated output at an ambient temperature of 44 degrees C 112 degrees F in full sunlight with expected life in excess of 10 years.

#### 2.2.1.1 Transformer

Transformer shall conform to UL 506.

#### 2.2.1.2 Rectifying Elements

Rectifying elements shall be silicone diodes or selenium cells connected to provide full-wave rectification. Silicone diodes shall be protected by selenium surge cells or varistors against over-voltage surges and by current limiting devices against over-current surges.

2.2.1.3 Meters

Meters shall be accurate to within plus or minus 2 percent of full scale at 27 degree C, 80 degrees F, and shall possess temperature stability above and below 27 degrees 80 degrees F of at least 1 percent per 5 degrees C. 10 degrees F. Separate meters shall be 2-1/2-inch nominal size or larger.

2.2.1.4 Circuit Breakers

A single pole, flush-mounted, fully magnetic, properly rated nonterminal type circuit breaker shall be installed in the primary circuit of the rectifier supply transformer.

2.2.1.5 Fuses

Cartridge-type fuses conforming to NEMA FU 1 with suitable fuse holders shall be provided in each leg of the dc circuit.

2.2.1.6 Automatic Cathodic Protection Control

The system shall be capable of maintaining a tank-to-water potential criterion of protection within plys or minus 25 millivolts regardless of changes in water chemistry, temperature, or water level in the tank. Provision shall be made for readily changing the range and limits of the criterion. The controller NEMA 4X housed integrally with the rectifier or in a separate cabinet with provisions for locking. The automatic controller shall be a completely solid-state design, and shall be capable of automatically maintaining the tank-to-water potential at minus 900 millivolts with respect to a copper-copper sulfate reference electrode within an accuracy of 25 millivolts. The tank-to-water potential measured and maintained by the controller shall be free of “IR” drop error.

2.2.1.7 Tank to Water Potential Meter

The controller shall be equipped with a calibrated voltmeter having an internal impedance exceeding 1 megohm which shall be so connected to read, from the system reference cell, the tank-to-water potential being maintained by the cathodic protection system. This voltage reading shall be free of “IR” drop error.

2.2.2 Cabinet

Cabinet shall be constructed of NEMA 4X molded fiberglass reinforced polyester, and shall be provided with a full door. The enclosure shall have oil-resistant gasket. The door shall be hinged and have a hasp that will permit the use of padlock. Holes, conduit knockouts, or threaded hubs of sufficient size and number shall be conveniently located.

2.2.2.1 Wiring Diagram

A complete wiring diagram of the power unit showing both the ac supply and the dc connections to anodes shall be on the inside of the cabinet door. All components shall be shown and labeled.

2.2.2.2 Grounding

Grounding provisions shall comply with NFPA 70 and UL 467 including a ground terminal in the cabinet. The grounding conductor from the terminal to the earth grounding system shall be solid or stranded copper not smaller

than No. 4 AWG. The earth grounding system shall consist of one or more rods. Ground rods shall be copper-class steel conforming to UL 467 not less than ¾-inch in diameter by 10 feet in length. Rods shall have driven full length into the earth. Sectional type rods may be used.

2.2.3 Wiring

Wiring shall be installed in accordance with NFPA 70 utilizing type TW or RHW or polyethylene insulation. Fittings for conduit and cable work shall conform to UL 514A. Outlets shall be of the threaded hub type with gasketed covers. Conduit shall be securely fastened at 8 foot intervals or less. Splices shall be made in outlet fitting only. Conductors shall be color coded for identification. Cable for anode header and distribution shall be No. 6 AWG stranded copper wire with type cathodic protection high molecular weight polyethylene insulation.

## 2.3 MISCELLANEOUS MATERIALS

2.3.1 Reference Electrodes

The electrodes shall be copper-copper sulphate with No. 14 AWG/RHW-USE lead wire attached. A minimum of four reference electrodes shall be part of this system. Electrodes shall be designed for 15 year life.

2.3.2 Electrical Wire and Associated Materials

2.3.2.1 Anode Connecting Wire

Anode connecting wire shall be No. 10 AWG stranded copper wire with type CP high molecular weight polyethylene insulation 7/64-inch thick, 600 volt rating, in accordance with NEMA WC 5. Cable-to-anode contact resistance shall be 0.003 ohms maximum.

2.3.2.2 Anode Header Cable

Cable for anode header and distribution shall be 6 AWG stranded copper wire with type CP high molecular weight polyethylene, 7/64-inch thick insulation, 600-volt rating, in accordance with NEMA WC 5. Cable-to-anode contact resistance shall be 0.003 ohms maximum.

2.3.2.3 Reference Electrode Wire

Reference electrode wire shall be stranded copper wire with NFPA 70 type RHW-USE or polyethylene insulation.

2.3.3 Conduit

Rigid galvanized steel conduit and accessories shall conform to UL 6. Nonmetallic conduit shall conform to NEMA TC 2.

2.3.4 Test Boxes and Junction Boxes

Boxes shall be outdoor type conforming to UL 514A.

2.3.5 Polyethylene Insulation

Polyethylene insulation shall comply with the requirements of ASTM D 1248 and the following types, classes, and grades:

2.3.5.1 High Molecular Weight Polyethylene

High molecular weight polyethylene shall be Type I, Class C, Grade E5.

2.3.5.2 High Density Polyethylene

High density polyethylene shall be Type III, Class C, Grade E3.

2.3.6 Pressure-Sensitive Vinyl Tape

Tape shall conform to UL 510.

2.3.7 Pressure Entrance Fitting

Pressure Entrance Fitting: The fitting shall accommodate all anode and reference wires and shall be manufactured to prevent leakage through the fitting and water migration through the wiring. The fitting shall be 1-1/2" diameter. Type THHN copper shall be utilized from the pressure fitting to the rectifier unit and from the rectifier unit to the negative ground connections.

2.3.8 Permanent Reference Cell

Permanent Reference Cell shall be suitable for use with rectifier controller. No rechargeable reference cells will be accepted.

2.3.9 Hardware

All steel hardware used in conjunction with this system that is required to be welded to the tank shall be installed prior to the tank being coated and shall be coated with the same paint system being applied to the tank.

PART 3 EXECUTION

3.1 ANODES

3.1.1 Anode Installation:

1. The components of the cathodic protection system shall be installed in the manner and at the locations as shown on the design drawings associated with this project.
2. The pressure entrance fitting shall be installed in accordance with AWWA D100-84 or latest revision, Section 3.13.
3. Welding, cutting and coating shall be in accordance with AWWA Standards D100, D102 and D105.
4. All materials and equipment shall be inspected prior to installation. Any defective component shall be repaired or replaced.
5. Electrical work shall be in accordance with the National Electric Code.
6. All lead wire shall be installed to prevent any damage caused by abrasion.

7. Electrical connections within the tank shall be be sealed to prevent water migration.
8. The rectifier shall be mounted on wet riser pipe and/or at a convenient height (eye level) above grade for monitoring and service purposes.

## 3.2 RECTIFIERS

### 3.2.1 Rectifier and Control Installation

Mounting shall be of the cross-arm mounted type. Mounting shall be suitable for installing on the rear wall of enclosure cabinet. Cabinet shall be mounted on one support column of the tank. Cabinet shall be mounted at location of existing rectifier enclosure (base approximately 36" above grade).

## 3.3 PERMANENT REFERENCE ELECTRODES

### 3.3.1 Calibration

Permanent reference electrodes shall be calibrated against a standard electrode before installation. Calibration shall be done in a test tank containing water with the same composition as the tank to be protected. The permanent electrodes shall measure reference voltage agreeing with that measured by the standard electrode within plus or minus 0.005 volt when the sensing windows of the two electrodes being compared are not more than 1/6 inch apart but not touching.

### 3.3.2 Installation

Reference electrodes shall be operable under the same icing conditions as the anodes system. Installation of permanent reference electrodes shall be made at points in the tank which will monitor minimum and maximum tank-to-water potentials and as otherwise needed for automatic control system. Sensing windows of reference electrodes shall be located between ¼ inch and ½ inch away from the steel surface sensed and shall be fixed in position preventing contact with tank steel.

### 3.3.3 Components of Cathodic Protection System

All work shall be in accordance with the following requirements:

1. Components of the cathodic protection system shall be installed in the manner and at the locations as shown on the drawings prepared by the Contractor.
2. Pressure entrance fitting shall be installed in accordance with AWWA D100-96, Section 3.1.3.
3. Welding of steel coupling and anchors for horizontal anode suspension and rectifier mounting bracket shall be furnished by the Contractor.
4. Any damages to existing tank coating shall be repaired and primed and repainted by the Contractor.
5. Electrical continuity of all sections of bolted or riveted tanks shall be furnished by the Contractor.
6. Materials and equipment shall be inspected prior to installation. Any defective component shall be repaired or replaced.
7. Lead wires shall be installed to prevent damage from abrasion.
8. Electrical connections within the tank shall be sealed to prevent water migration.
9. AC power (source) to the rectifier shall be supplied by the Government.
10. Disinfecting shall be the responsibility of the Government.

## 3.4 CRITERIA OF PROTECTION

Acceptance criteria for determining the adequacy of protection on the internal submerged surfaces of steel water tanks shall be in accordance with NACE RP0388 and as specified below.

### 3.4.1 Minimum

The criterion of protection shall be a negative voltage of at least minus 850 millivolts as measured between the tank and saturated copper-copper-sulphate reference electrode. Determination of this voltage shall be made with the cathodic protection system in operation. Voltage drops shall be considered for valid interpretation of this voltage measurement. A minimum of minus 850 millivolts “instant off” potential between the tank surface being tested and the reference cell shall be achieved over 95 percent of the area of the structure. Adequate number of measurements shall be obtained over the entire tank surface to verify and record achievement of minus 850 millivolts “instant off.” This potential shall be obtained over 95 percent of the total metallic area without the “instant off” potential exceeding the maximum limit indicated below.

### 3.4.2 Maximum

In order to mitigate disbonding of the interior coating in the tank, potential between a copper-copper-sulfate reference electrode and the tank at any point shall not be more than minus 1.07 volt measured with the electrode located between ½ inch and ½ inch and away from the steel surface but not touching it.

## 3.5 TESTING, ADJUSTING, AND PLACING IN SERVICE

### 3.5.1 Electrode Potential Measurements

Upon completion of this installation, the tank shall be filled to maximum working level and with the entire cathodic protection system in operation; electrode potential measurements shall be made using a copper-copper-sulphate reference electrode and a potentialmeter-voltmeter, or a direct current voltmeter having an input impedance of not less than 1,000,000 ohms per volt and a full scale of 10 volts. The locations of these measurements shall be identical to the locations used for baseline potentials. The values obtained and the date, time, and locations of measurements shall be recorded.

#### 3.5.1.1 Tank-to-Water Potential Measurements

A series of "native", "on", and "instant off" tank-to-water potential measurements with a portable reference electrode placed not more than ½ inch away from but not touching the tank shall be performed:

a. On a vertical line midway between two anode strings beginning at a point 1 foot below water level and continuing at points 3 feet apart until the bottom of the tank is reached.

b. On a second vertical line midway between two anode strings on the opposite side of the tank from the first vertical line beginning at a point 1 foot below water level and continuing at points 3 feet apart until the bottom of the tank is reached.

c. Across the bottom of the tank in a line between the two vertical lines at 3 foot intervals.

d. In at least four places which are closest to anodes.

3.5.1.2 Reference Electrode Calibration

The portable reference electrode used for the test shall be calibrated against the standard electrode specified in paragraph 3.3, PERMANENT REFERENCE ELECTRODES.

3.5.1.3 Test Measurement Recording

All test measurements and their locations, as well as measurements made with the permanent electrodes simultaneously with the test measurements, shall be recorded.

3.5.2 Adjusting

Final adjustment of the rectifier output current shall be made so that repeated voltage readings taken as specified for testing meet the criteria in paragraph 3.4, CRITERIA OF PROTECTION.

3.5.3 Placing in Service

After final adjustment, the cathodic protection system shall be placed in service and the condition of the system as left by the Contractor shall be recorded and shall indicate transformer tap settings; voltage readings from reference electrode to tank, readings both horizontal and vertical; automatic control differential setting; ac supply voltage; adjusted dc output voltage; and total protective current.

## 3.6 TRAINING

The Contractor shall conduct a training course for the operating staff as designated by the Contracting Officer. The training period shall consist of a total of 4 hours of normal working time and shall start after the system is functionally complete but prior to final acceptance tests. The field instructions shall cover all of the items contained in the operating and maintenance instructions, as well as demonstrations of routine maintenance operations. The Contracting Officer shall be notified at least 14 days prior to date of proposed starting of the training course.

## 3.7 GUARANTEE

All workmanship, materials, and equipment shall be guaranteed for a period of one (1) year from the date of final acceptance or beneficial use. The Contractor shall guarantee that the cathodic protection system, when maintained and operated in accordance with the manufacturer's instructions, shall provide protection against corrosion of the submerged surface inside the tank. In the event corrosion is not prevented, the Contractor shall, at his own expense, make whatever changes are necessary in the cathodic protection system to prevent corrosion.

## 3.8 OPERATING AND MAINTENANCE INSTRUCTIONS

The Contractor shall submit four (4) copies of the data in report form along with detailed operation and maintenance instructions. The cathodic protection system shall be kept in operation in accordance with the test results and the supplier's recommendations. The Government shall monitor the operating conditions monthly and notify the contractor upon finding irregularities. The contractor shall provide price for Government’s option for annual inspection services after expiration of the one year guarantee. The annual inspection `will` include a complete inspection of the entire cathodic protection system's major components and a potential profile to determine any necessary changes.

## 3.9 ACCEPTANCE

Final acceptance will not be given until the Contractor has successfully completed all tests and after all defects in installation, material or operation have been corrected.

-- End of Section --

WAGE DETERMINATION DECISION

**OF THE SECRETARY OF LABOR**

The following wage determination will be used to conform With the requirements of the Service Contract Act of 1965(29 CFR 4) of the General Provisions:

Decision No. 94-2103 (Rev. 28) dated 4 October 2002

State(s): District of Columbia, Maryland, Virginia
Areas: Maryland COUNTIES of Calvert,Charles,Frederick, Montgomery, Prince George's, St. Mary's.
Virginia COUNTIES of Arlington, Fairfax, Fauquier, King George, Loudoun, Prince William, Stafford,Alexandria, Falls Church

WAGE DETERMINATION NO: 94-2103 REV (28) AREA: DC,DISTRICT-WIDE

WAGE DETERMINATION NO: 94-2103 REV (28) AREA: DC,DISTRICT-WIDE
REGISTER OF WAGE DETERMINATIONS UNDER | U.S. DEPARTMENT OF LABOR
***FOR OFFICIAL USE ONLY BY FEDERAL AGENCIES PARTICIPATING IN MOU WITH DOL***
| WASHINGTON D.C. 20210
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|
| Wage Determination No.: 1994-2103
William W.Gross Division of | Revision No.: 28
Director Wage Determinations | Date Of Last Revision: 10/04/2002

States: District of Columbia, Maryland, Virginia
Area: District of Columbia Statewide
Maryland Counties of Calvert, Charles, Frederick, Montgomery, Prince George's, St Mary's
Virginia Counties of Alexandria, Arlington, Fairfax, Falls Church, Fauquier, King George, Loudoun, Prince William, Stafford

**Fringe Benefits Required Follow the Occupational Listing**

| OCCUPATION TITLE | MINIMUM WAGE RATE |
|---|---|
| Administrative Support and Clerical Occupations | |
| Accounting Clerk I | 10.16 |
| Accounting Clerk II | 11.88 |
| Accounting Clerk III | 14.04 |
| Accounting Clerk IV | 16.37 |
| Court Reporter | 14.94 |
| Dispatcher, Motor Vehicle | 14.63 |
| Document Preparation Clerk | 11.29 |
| Duplicating Machine Operator | 11.29 |
| Film/Tape Librarian | 14.65 |
| General Clerk I | 11.68 |
| General Clerk II | 13.72 |
| General Clerk III | 15.32 |
| General Clerk IV | 18.74 |
| Housing Referral Assistant | 17.82 |
| Key Entry Operator I | 10.40 |
| Key Entry Operator II | 11.62 |
| Messenger (Courier) | 9.30 |
| Order Clerk I | 14.74 |
| Order Clerk II | 16.29 |
| Personnel Assistant (Employment) I | 13.05 |
| Personnel Assistant (Employment) II | 14.24 |
| Personnel Assistant (Employment) III | 16.42 |
| Personnel Assistant (Employment) IV | 19.60 |
| Production Control Clerk | 17.28 |
| Rental Clerk | 15.42 |
| Scheduler, Maintenance | 14.06 |
| Secretary I | 14.71 |
| Secretary II | 15.35 |
| Secretary III | 18.49 |
| Secretary IV | 19.57 |
| Secretary V | 22.79 |
| Service Order Dispatcher | 14.04 |
| Stenographer I | 14.68 |
| Stenographer II | 16.47 |

| | |
|---|---|
| Supply Technician | 19.57 |
| Survey Worker (Interviewer) | 14.94 |
| Switchboard Operator-Receptionist | 10.96 |
| Test Examiner | 15.35 |
| Test Proctor | 15.35 |
| Travel Clerk I | 11.63 |
| Travel Clerk II | 12.49 |
| Travel Clerk III | 13.41 |
| Word Processor I | 11.80 |
| Word Processor II | 14.22 |
| Word Processor III | 16.65 |
| Automatic Data Processing Occupations | |
| Computer Data Librarian | 11.69 |
| Computer Operator I | 13.30 |
| Computer Operator II | 15.67 |
| Computer Operator III | 18.60 |
| Computer Operator IV | 18.94 |
| Computer Operator V | 22.94 |
| Computer Programmer I (1) | 19.64 |
| Computer Programmer II (1) | 23.05 |
| Computer Programmer III (1) | 26.99 |
| Computer Programmer IV (1) | 27.62 |
| Computer Systems Analyst I (1) | 26.99 |
| Computer Systems Analyst II (1) | 27.62 |
| Computer Systems Analyst III (1) | 27.62 |
| Peripheral Equipment Operator | 14.06 |
| Automotive Service Occupations | |
| Automotive Body Repairer, Fiberglass | 21.38 |
| Automotive Glass Installer | 17.03 |
| Automotive Worker | 17.03 |
| Electrician, Automotive | 18.05 |
| Mobile Equipment Servicer | 14.94 |
| Motor Equipment Metal Mechanic | 19.03 |
| Motor Equipment Metal Worker | 17.03 |
| Motor Vehicle Mechanic | 19.11 |
| Motor Vehicle Mechanic Helper | 16.01 |
| Motor Vehicle Upholstery Worker | 17.03 |
| Motor Vehicle Wrecker | 17.03 |
| Painter, Automotive | 18.05 |
| Radiator Repair Specialist | 17.03 |
| Tire Repairer | 14.43 |
| Transmission Repair Specialist | 19.03 |
| Food Preparation and Service Occupations | |
| Baker | 11.87 |
| Cook I | 10.41 |
| Cook II | 11.87 |
| Dishwasher | 8.76 |
| Food Service Worker | 9.01 |
| Meat Cutter | 16.07 |
| Waiter/Waitress | 8.17 |
| Furniture Maintenance and Repair Occupations | |
| Electrostatic Spray Painter | 18.05 |
| Furniture Handler | 12.55 |
| Furniture Refinisher | 18.05 |
| Furniture Refinisher Helper | 13.85 |
| Furniture Repairer, Minor | 16.01 |
| Upholsterer | 18.05 |
| General Services and Support Occupations | |
| Cleaner, Vehicles | 9.67 |
| Elevator Operator | 9.79 |
| Gardener | 12.98 |
| House Keeping Aid I | 9.02 |
| House Keeping Aid II | 9.28 |
| Janitor | 9.64 |
| Laborer, Grounds Maintenance | 10.75 |
| Maid or Houseman | 9.28 |

| | |
|---|---|
| Pest Controller | 11.85 |
| Refuse Collector | 10.88 |
| Tractor Operator | 12.73 |
| Window Cleaner | 10.51 |
| Health Occupations | |
| Dental Assistant | 14.36 |
| Emergency Medical Technician (EMT)/Paramedic/Ambulance Driver | 11.95 |
| Licensed Practical Nurse I | 14.43 |
| Licensed Practical Nurse II | 16.20 |
| Licensed Practical Nurse III | 18.13 |
| Medical Assistant | 11.76 |
| Medical Laboratory Technician | 13.93 |
| Medical Record Clerk | 13.57 |
| Medical Record Technician | 14.21 |
| Nursing Assistant I | 8.46 |
| Nursing Assistant II | 9.52 |
| Nursing Assistant III | 11.94 |
| Nursing Assistant IV | 13.40 |
| Pharmacy Technician | 11.84 |
| Phlebotomist | 11.21 |
| Registered Nurse I | 22.54 |
| Registered Nurse II | 25.08 |
| Registered Nurse II, Specialist | 25.08 |
| Registered Nurse III | 32.38 |
| Registered Nurse III, Anesthetist | 32.38 |
| Registered Nurse IV | 38.81 |
| Information and Arts Occupations | |
| Audiovisual Librarian | 18.95 |
| Exhibits Specialist I | 16.79 |
| Exhibits Specialist II | 20.99 |
| Exhibits Specialist III | 25.84 |
| Illustrator I | 17.03 |
| Illustrator II | 21.29 |
| Illustrator III | 26.20 |
| Librarian | 22.33 |
| Library Technician | 15.03 |
| Photographer I | 13.93 |
| Photographer II | 15.64 |
| Photographer III | 19.56 |
| Photographer IV | 24.08 |
| Photographer V | 26.50 |
| Laundry, Dry Cleaning, Pressing and Related Occupations | |
| Assembler | 8.71 |
| Counter Attendant | 8.71 |
| Dry Cleaner | 9.83 |
| Finisher, Flatwork, Machine | 8.71 |
| Presser, Hand | 8.71 |
| Presser, Machine, Drycleaning | 8.71 |
| Presser, Machine, Shirts | 8.71 |
| Presser, Machine, Wearing Apparel, Laundry | 8.71 |
| Sewing Machine Operator | 10.63 |
| Tailor | 12.43 |
| Washer, Machine | 9.31 |
| Machine Tool Operation and Repair Occupations | |
| Machine-Tool Operator (Toolroom) | 18.05 |
| Tool and Die Maker | 21.95 |
| Material Handling and Packing Occupations | |
| Forklift Operator | 14.58 |
| Fuel Distribution System Operator | 19.38 |
| Material Coordinator | 16.97 |
| Material Expediter | 16.97 |
| Material Handling Laborer | 11.50 |
| Order Filler | 13.21 |
| Production Line Worker (Food Processing) | 12.80 |
| Shipping Packer | 12.21 |
| Shipping/Receiving Clerk | 13.09 |

| | |
|---|---|
| Stock Clerk (Shelf Stocker; Store Worker II) | 12.69 |
| Store Worker I | 8.89 |
| Tools and Parts Attendant | 16.99 |
| Warehouse Specialist | 15.01 |
| Mechanics and Maintenance and Repair Occupations | |
| Aircraft Mechanic | 21.95 |
| Aircraft Mechanic Helper | 14.51 |
| Aircraft Quality Control Inspector | 23.11 |
| Aircraft Servicer | 16.78 |
| Aircraft Worker | 17.84 |
| Appliance Mechanic | 18.05 |
| Bicycle Repairer | 14.43 |
| Cable Splicer | 20.93 |
| Carpenter, Maintenance | 18.05 |
| Carpet Layer | 17.61 |
| Electrician, Maintenance | 22.59 |
| Electronics Technician, Maintenance I | 16.08 |
| Electronics Technician, Maintenance II | 20.88 |
| Electronics Technician, Maintenance III | 22.73 |
| Fabric Worker | 15.76 |
| Fire Alarm System Mechanic | 19.03 |
| Fire Extinguisher Repairer | 14.94 |
| Fuel Distribution System Mechanic | 20.93 |
| General Maintenance Worker | 16.46 |
| Heating, Refrigeration and Air Conditioning Mechanic | 19.03 |
| Heavy Equipment Mechanic | 19.03 |
| Heavy Equipment Operator | 19.31 |
| Instrument Mechanic | 19.03 |
| Laborer | 10.70 |
| Locksmith | 18.05 |
| Machinery Maintenance Mechanic | 20.51 |
| Machinist, Maintenance | 21.52 |
| Maintenance Trades Helper | 13.85 |
| Millwright | 19.24 |
| Office Appliance Repairer | 18.05 |
| Painter, Aircraft | 20.76 |
| Painter, Maintenance | 18.05 |
| Pipefitter, Maintenance | 19.04 |
| Plumber, Maintenance | 18.05 |
| Pneudraulic Systems Mechanic | 19.03 |
| Rigger | 19.03 |
| Scale Mechanic | 17.03 |
| Sheet-Metal Worker, Maintenance | 19.03 |
| Small Engine Mechanic | 20.05 |
| Telecommunication Mechanic I | 19.41 |
| Telecommunication Mechanic II | 20.45 |
| Telephone Lineman | 20.93 |
| Welder, Combination, Maintenance | 19.03 |
| Well Driller | 19.03 |
| Woodcraft Worker | 19.03 |
| Woodworker | 15.32 |
| Miscellaneous Occupations | |
| Animal Caretaker | 8.97 |
| Carnival Equipment Operator | 11.11 |
| Carnival Equipment Repairer | 11.97 |
| Carnival Worker | 7.48 |
| Cashier | 8.53 |
| Desk Clerk | 9.78 |
| Embalmer | 19.04 |
| Lifeguard | 9.67 |
| Mortician | 21.63 |
| Park Attendant (Aide) | 12.15 |
| Photofinishing Worker (Photo Lab Tech., Darkroom Tech) | 9.03 |
| Recreation Specialist | 15.94 |
| Recycling Worker | 14.06 |
| Sales Clerk | 10.04 |

| | |
|---|---|
| School Crossing Guard (Crosswalk Attendant) | 10.34 |
| Sport Official | 11.24 |
| Survey Party Chief (Chief of Party) | 14.92 |
| Surveying Aide | 9.27 |
| Surveying Technician (Instr. Person/Surveyor Asst./Instr.) | 14.18 |
| Swimming Pool Operator | 13.21 |
| Vending Machine Attendant | 10.20 |
| Vending Machine Repairer | 13.24 |
| Vending Machine Repairer Helper | 10.77 |
| Personal Needs Occupations | |
| Child Care Attendant | 11.37 |
| Child Care Center Clerk | 15.86 |
| Chore Aid | 8.05 |
| Homemaker | 16.45 |
| Plant and System Operation Occupations | |
| Boiler Tender | 20.85 |
| Sewage Plant Operator | 19.15 |
| Stationary Engineer | 20.85 |
| Ventilation Equipment Tender | 13.85 |
| Water Treatment Plant Operator | 19.72 |
| Protective Service Occupations | |
| Alarm Monitor | 15.04 |
| Corrections Officer | 17.69 |
| Court Security Officer | 18.84 |
| Detention Officer | 18.29 |
| Firefighter | 19.72 |
| Guard I | 9.51 |
| Guard II | 12.53 |
| Police Officer | 20.54 |
| Stevedoring/Longshoremen Occupations | |
| Blocker and Bracer | 16.46 |
| Hatch Tender | 15.74 |
| Line Handler | 15.74 |
| Stevedore I | 15.47 |
| Stevedore II | 17.45 |
| Technical Occupations | |
| Air Traffic Control Specialist, Center (2) | 28.96 |
| Air Traffic Control Specialist, Station (2) | 19.97 |
| Air Traffic Control Specialist, Terminal (2) | 21.99 |
| Archeological Technician I | 14.57 |
| Archeological Technician II | 16.29 |
| Archeological Technician III | 20.20 |
| Cartographic Technician | 22.73 |
| Civil Engineering Technician | 19.56 |
| Computer Based Training (CBT) Specialist/ Instructor | 23.94 |
| Drafter I | 12.22 |
| Drafter II | 15.30 |
| Drafter III | 17.18 |
| Drafter IV | 21.49 |
| Engineering Technician I | 15.50 |
| Engineering Technician II | 17.99 |
| Engineering Technician III | 21.63 |
| Engineering Technician IV | 24.82 |
| Engineering Technician V | 30.35 |
| Engineering Technician VI | 36.72 |
| Environmental Technician | 19.29 |
| Flight Simulator/Instructor (Pilot) | 27.76 |
| Graphic Artist | 20.36 |
| Instructor | 23.34 |
| Laboratory Technician | 15.98 |
| Mathematical Technician | 23.39 |
| Paralegal/Legal Assistant I | 16.71 |
| Paralegal/Legal Assistant II | 21.31 |
| Paralegal/Legal Assistant III | 26.07 |
| Paralegal/Legal Assistant IV | 31.54 |
| Photooptics Technician | 21.06 |

| | |
|---|---|
| Technical Writer | 23.99 |
| Unexploded (UXO) Safety Escort | 18.40 |
| Unexploded (UXO) Sweep Personnel | 18.40 |
| Unexploded Ordnance (UXO) Technician I | 18.40 |
| Unexploded Ordnance (UXO) Technician II | 22.27 |
| Unexploded Ordnance (UXO) Technician III | 26.69 |
| Weather Observer, Combined Upper Air and Surface Programs (3) | 16.64 |
| Weather Observer, Senior (3) | 19.38 |
| Weather Observer, Upper Air (3) | 16.64 |
| Transportation/ Mobile Equipment Operation Occupations | |
| Bus Driver | 15.09 |
| Parking and Lot Attendant | 8.62 |
| Shuttle Bus Driver | 12.94 |
| Taxi Driver | 10.60 |
| Truckdriver, Heavy Truck | 17.52 |
| Truckdriver, Light Truck | 11.78 |
| Truckdriver, Medium Truck | 14.97 |
| Truckdriver, Tractor-Trailer | 17.52 |

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# ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: $2.15 an hour or $86.00 a week or $372.67 a month

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 5 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

THE OCCUPATIONS WHICH HAVE PARENTHESES AFTER THEM RECEIVE THE FOLLOWING BENEFITS (as numbered):

1) Does not apply to employees employed in a bona fide executive, administrative, or professional capacity as defined and delineated in 29 CFR 541. (See CFR 4.156)

2) APPLICABLE TO AIR TRAFFIC CONTROLLERS ONLY - NIGHT DIFFERENTIAL: An employee is entitled to pay for all work performed between the hours of 6:00 P.M. and 6:00 A.M. at the rate of basic pay plus a night pay differential amounting to 10 percent of the rate of basic pay.

3) WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am. If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of

basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordinance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordance, explosives, and incendiary material differential pay.

## *** UNIFORM ALLOWANCE ***

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of $3.35 per week (or $.67 cents per day). However, in those instances where the uniforms furnished are made of

"wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

** NOTES APPLYING TO THIS WAGE DETERMINATION **

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444

***(SF 1444)}***

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 ©(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

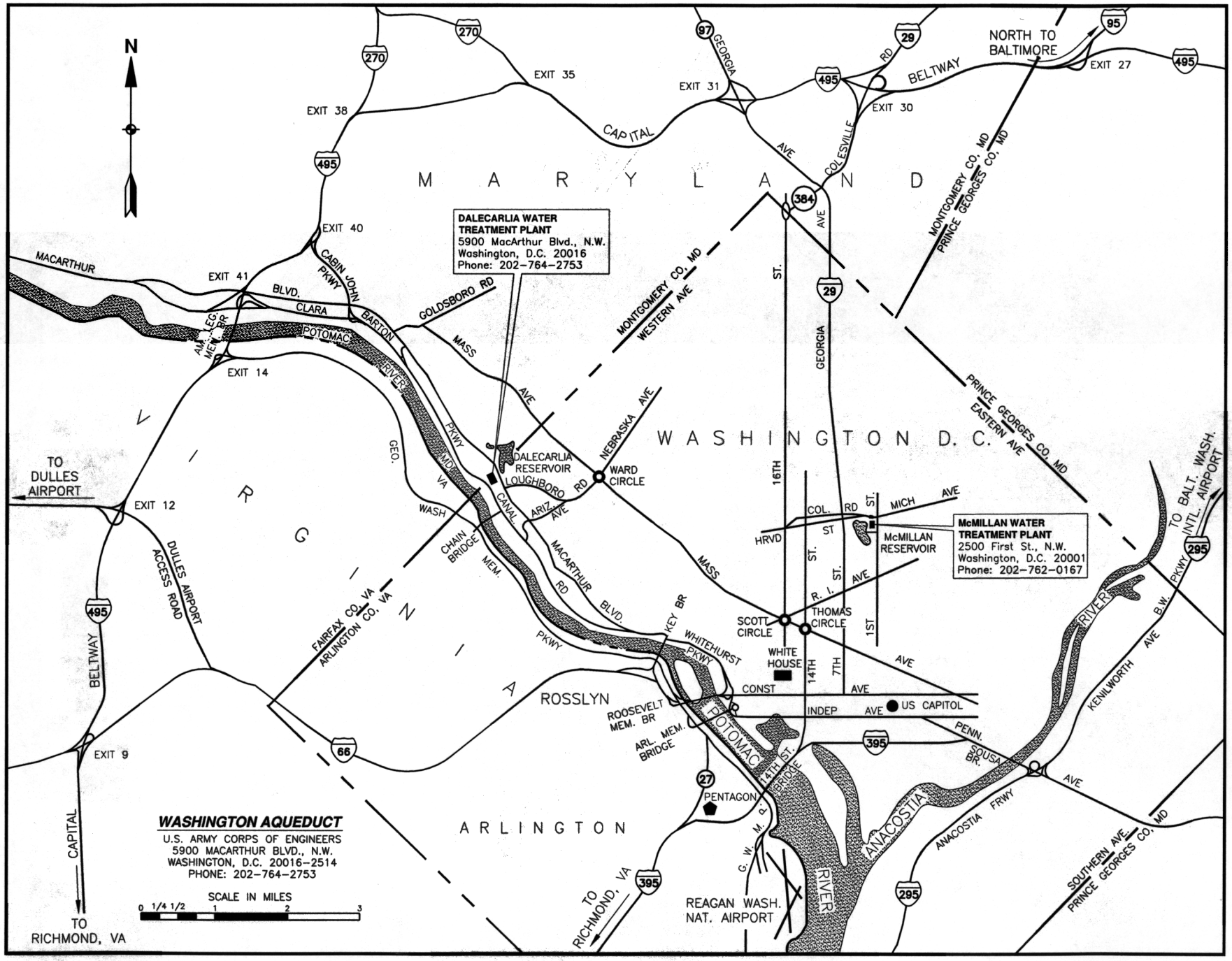
1) When preparing the bid, the contractor identifies the need for a conformed occupation) and computes a proposed rate).
2) After contract award, the contractor prepares a written report listing in order proposed classification title), a Federal grade equivalency (FGE) for each proposed

classification), job description), and rationale for proposed wage rate), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).
4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.
5) The contracting officer transmits the Wage and Hour decision to the contractor.
6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

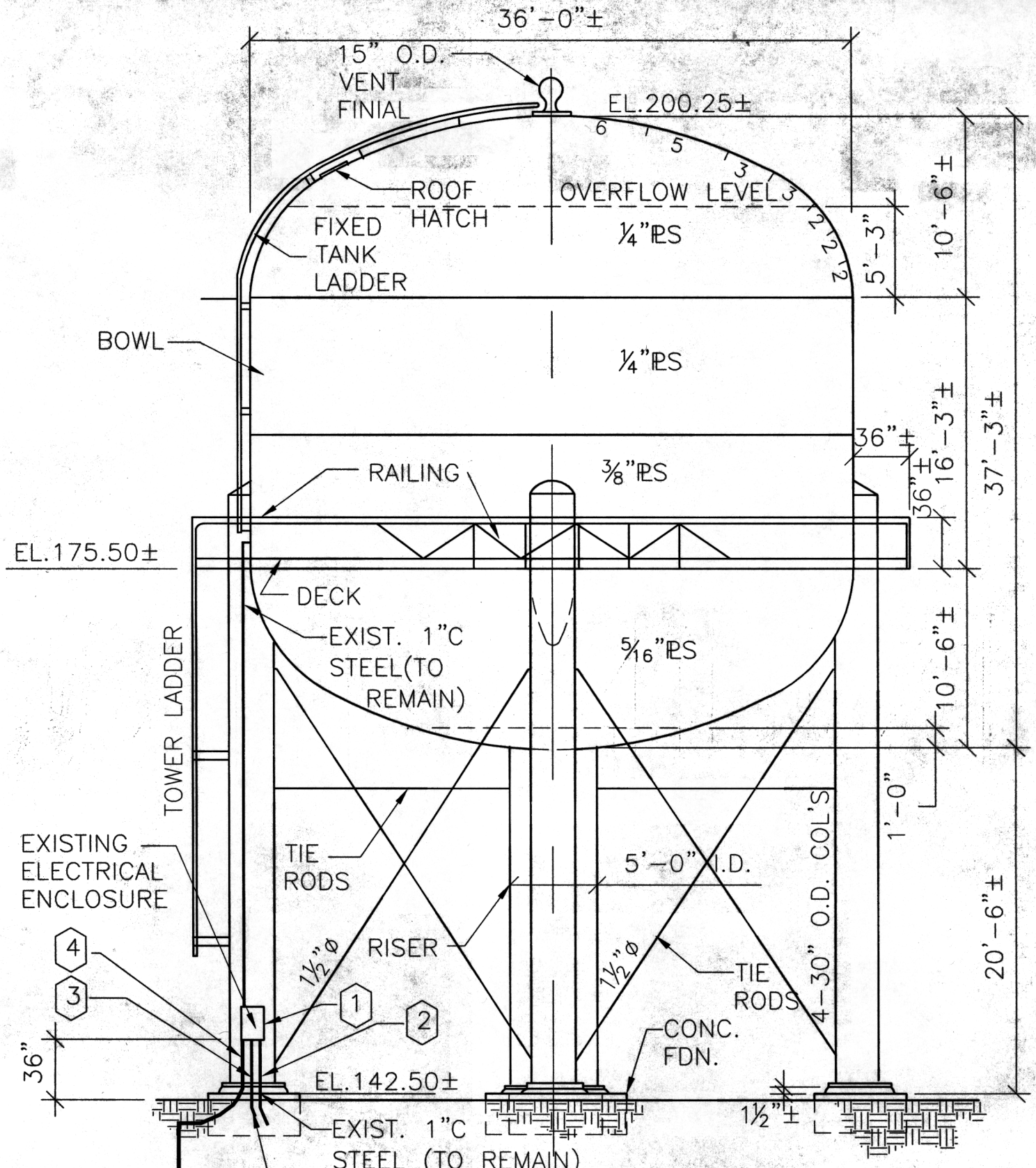



# WASHINGTON AQUEDUCT
# WASH WATER TANK IMPROVEMENTS

VICINITY MAP

| DRAWING NUMBER | PLATE |
|---|---|
| 40.14-1.4B | 1 |

DATE: JAN 2003 SHEET: E-1




WASHINGTON AQUEDUCT
WASH WATER TANK IMPROVEMENTS

| DRAWING NUMBER | PLATE |
|---|---|
| 40.14-1.4C | 2 |

DATE: JAN 2003 SHEET: E-2

**200,000 GALLON CAPACITY STEEL WATER TANK**

SCALE: ⅛'=1'-0" APPROX

PLATE 3 OF 4

**SEE ATTACHED FOR PLATE 3 OF 4**

GENERAL NOTES

1. THIS PROJECT REQUIRES REPLACING THE CATHODIC PROTECTION SYSTEM FOR A 200,000 GALLON ELEVATED STEEL WATER TANK. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DRAWINGS, NOTES AND SPECIFICATION.

2. THE CONTRACTOR SHALL DESIGN AND INSTALL AN IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM SUITABLE FOR AN ELEVATED STEEL WATER TANK THAT IS SUBJECT TO ICING CONDITIONS. DESIGN SHALL BE BASED UPON SPECIFICATION SECTION 13111, DRAWINGS, NOTES SHOWN ON THIS PLATE, AND EXISTING CONDITIONS. THE TANK'S COATING AND PAINTING WERE REPLACED IN 2000. THE EXISITNG CATHODIC PROTECTION SYSTEM HAS BEEN OUT OF SERVICE SINCE 2000.

3. THE CONTRACTOR MUST DEMOLISH AND REMOVE ALL EXISTING CATHODIC PROTECTION SYSTEM MATERIAL AND EQUIPMENT AS INDICATED ON THIS PLATE. ALL WIRING FED FROM EXISTING RECTIFIER (VIA 1" CONDUIT) TO TANK BOWL AND RISER SHALL BE REMOVED. ALL EXISTING ANODES AND RELATED COMPONENTS SHALL BE REMOVED FROM INSIDE THE TANK BOWL AND RISER.

4. ALL DEMOLISHED ITEMS SHALL BE TURNED OVER TO THE WASHINGTON AQUEDUCT MAINTENANCE DEPARTMENT. CONTACT THE CONTRACTING OFFICER OR CONTRACTING OFFICER'S REPRESENTATIVE FOR COORDINATION.

5. ALL DIMENSIONS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION.

6. ALL CONDUITS, CABLES AND RACEWAYS SHALL BE BONDED AND GROUNDED. ALL ITEMS SHALL BE GROUNDED TO THE EXISTING GROUND WIRE IN THE ELECTRICAL PANEL IN BUILDING D-23 AND THE NEW GROUND ROD.

7. UNLESS OTHERWISE INDICATED, ALL MOUNTING ELEVATIONS ARE ABOVE GROUND TO THE BOTTOM OF EQUIPMENT.

8. ALL WORK MUST BE PERFORMED IN COMPLIANCE WITH EM385-1-1, (1996) U.S. Army Corps of Engineers Safety and Health Requirements Manual.

9. THE CONTRACTOR MUST COORDINATE WITH THE CONTRACTING OFFICER OR THEIR REPRESENTATIVE BEFORE PERFORMING WORK THAT IMPACTS EXISTING ELECTRICAL SYSTEM.

10. THE CONTRACTOR SHALL REPLACE EXISTING 120V RECEPTACLE (LOCATED INSIDE THE ELECTRICAL ENCLOSURE) WITH NEW 120V RECEPTACLE (WEATHERPROOF WITH COVER).

11. ALL CONDUIT PENTRATIONS SHALL BE SEALED TO PREVENT DAMAGE FROM FIRE, WEATHER AND CORROSION.

WASHINGTON AQUEDUCT
DALECARLIA WATER TREATMENT PLANT, WASHINGTON, D.C.

# WASH WATER TANK IMPROVEMENTS

GENERAL NOTES

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| DESIGNED BY: WPS<br>CAD BY: JS<br>CHECKED BY: WPS | DRAWING NUMBER: 40.14-1.4D<br>DATE: MAY 2003 | SHEET: E-3 | PLATE: 3 |

PLATE 4 OF 4

**SEE ATTACHED FOR PLATE 4 OF 4**

NUMBERED NOTES

1. EXISTING CATHODIC PROTECTION SYSTEM RECTIFIER ELECTRICAL ENCLOSURE (24" x 18" x 18"). REPLACE WITH NEW WEATHERPROOF NEMA 4X ENCLOSURE (SIZED TO ACCOMMODATE NEW AUTOMATIC RECTIFIER AND ELECTRICAL OUTLET). EXISTING RECTIFIER AND 120V RECEPTACLE OUTLET SHALL BE REPLACED WITH A NEW AUTOMATIC RECTIFIER AND WEATHERPROOF 120V ELECTRICAL OUTLET. NEW ENCLOSURE SHALL BE INSTALLED 36" ABOVE GRADE. ALL CONDUITS SHOWN TO REMAIN SHALL BE ROUTED INTO NEW ENCLOSURE. EXISTING CONDUCTORS FROM RECTIFIER TO TANK SHALL BE REMOVED IN ACCORDANCE WITH THE GENERAL NOTES.

2. EXISTING 1" CONDUIT AND CONDUCTORS FROM THE EXISTING CATHODIC PROTECTION SYSTEM RECTIFIER TO EXISTING 120V FEED AT CIRCUIT BREAKER NUMBER 8 (RATED 20 AMPS) OF ELECTRICAL PANEL IN NEABY SUBSTATION (BUILDING D-23). BUILDING D-23 IS LOCATED APPROX. 100 FEET FROM EXISTING RECTIFIER. THE EXISTING CONDUIT, 20AMP CIRCUIT BREAKER AND CONDUCTORS SHALL REMAIN TO SERVICE NEW CATHODIC PROTECTION SYSTEM AUTOMATIC RECTIFIER UNLESS NEW AUTOMATIC RECTIFIER ELECTRICAL (INPUT POWER) EXCEEDS THE RATING OF EXISTING DEVICES. IN SUCH CASE, THE CONTRACTOR SHALL INSTALL A NEW CIRCUIT BREAKER AT CIRCUIT NUMBER EIGHT AND NEW CONDUCTORS AND/OR NEW SCHEDULE 40 PVC CONDUIT BETWEEN BUILDING D-23 AND THE NEW AUTOMATIC RECTIFIER. IF NEW CONDUIT IS REQUIRED, EXISTING CONDUIT SHALL BE CUT, CAPPED AND SEALED EIGHT FEET BELOW PENETRATION OF GRADE AND NEW CONDUIT SHALL BE INSTALLED UNDERGROUND (DIRECT BURIED 24" BELOW GRADE) BETWEEN BUILDING D-23 AND THE NEW AUTOMATIC RECTIFIER. IF NEW CONDUIT IS INSTALLED, CONTRACTOR SHALL USE THE PENETRATION USED BY EXISTING RECTIFIER POWER CONDUIT INTO BUILDING D-23. IF NEW CONDUCTORS ARE REQUIRED, EXISTING CONDUCTORS SHALL BE DEMOLISHED AND NEW CONDUCTORS SHALL BE PULLED THROUGH EXISTING CONDUIT (IF APPLICABLE) OR NEW CONDUIT. IF A NEW CIRCUIT BREAKER IS REQUIRED, THE EXISTING CIRCUIT BREAKER (CIRCUIT NUMBER EIGHT) SHALL BE REPLACED WITH A NEW CIRCUIT BREAKER RATED TO SERVICE NEW AUTOMATIC RECTIFIER CIRCUIT. NEW CONDUIT AND CONDUCTORS SHALL BE INSTALLED IF APPLICABLE. THE CONTRACTOR MUST ENSURE THAT CONDUIT, CONDUCTORS AND CIRCUIT BREAKER ARE SIZED PROPERLY TO SUPPLY POWER TO THE CATHODIC PROTECTION SYSTEM.

3. REMOVE ABANDONED 2" CONDUIT THAT PENETRATES THE BOTTOM OF EXISTING CATHODIC PROTECTION SYSTEM RECTIFIER ELECTRICAL ENCLOSURE. CONDUIT SHALL BE CUT, CAPPED AND SEALED EIGHT FEET BELOW GRADE PENETRATION. CONTRACTOR MUST REMOVE ALL CONDUCTORS. CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER OR CONTRACTING OFFICER'S REPRESENTATIVE PRIOR TO REMOVING CONDUCTORS.

4. NEW ½” PVC CONDUIT, BARE #4 AWG COPPER GROUND CABLE AND COPPER CLAD STEEL GROUND ROD (3/4” X 10’L).

## WASH WATER TANK IMPROVEMENTS

NUMBERED NOTES

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| DESIGNED BY: WPS<br>CAD BY: JS<br>CHECKED BY: WPS | DRAWING NUMBER: 40.14-1.4E<br>DATE: MAY 2003 | SHEET: E-4 | PLATE: 4 |